

**REMARKS*****Generally***

Claims 5-13 were pending in the application. The specification is objected to because of a blank government contract number. Claims 5-13 are newly rejected under 35 USC §101. Claims 7 and 12 are newly rejected under 35 USC §112 second paragraph. Claims 5 and 8-11 stand rejected under 35 USC §102(a) as being anticipated by Xu *et al.* (Bioinformatics, vol. 18, pages 1432-1437, November 1<sup>st</sup>, 2002) – hereinafter “XU.” Claims 12-13 are newly rejected under 35 USC § 102(b) as being anticipated by Lai *et al.* (Biochimica et Biophysica Acta, Vol. 1517, Pages 449-454, 2001) - hereinafter “LAI.” Claim 6 stands rejected under 35 USC §103(a) as being unpatentable over XU. Claim 7 is newly rejected under 35 USC §103(a) as being unpatentable over XU in view of Bensen *et al.* (Nucleic Acids Research, Vol. 21, Pages 2963-2965, 1993) - hereinafter “BENSEN.”

The claims have been amended to cancel Claims 5-11 and to address rejections under §§101, 102, and 112 against Claims 12 and 13.

***Regarding the Specification***

The OA objects to the blank contract number in the *Statement Regarding Federally Sponsored Research and Development*. An investigation remains underway to identify contract(s), if any, in the performance of which embodiments of the invention were conceived or first reduced to practice. A reference to any such contract will be added to the application promptly upon identification. The undersigned proposes that this objection be held in abeyance until allowable subject matter is indicated.

***Regarding Rejection of Claims 12 and 13 Under 35 USC §101***

The OA asserts that Claims 5-13 do not produce a “tangible” result. As recommended in the OA, the uncanceled claims have been amended to explicitly recite outputting to computer memory the identity of sequences. Support for this amendment can be found in the disclosure, e.g., [0009]. For at least this reason, the undersigned requests that the rejection under §101 against Claims 12 and 13 be withdrawn.

The undersigned maintains that the OA mistakenly characterizes the Claims 5-13 as not setting forth “a practical application to produce a real world result.” A list of those oligonucleotides unique to a set of organisms is a very real world result with substantial practical application.

***Regarding Rejection of Claim 12 Under 35 USC §112***

Regarding Claim 12, the OA asserts:

It is unclear whether the selected genomic database includes or excludes sequences from the set of organisms under investigation.

The claim does not depend on whether the selected genomic database includes or excludes sequences from the set of organisms under investigation. The last clause of the claim chooses only sequences from organism other than the set under investigation.

Further regarding Claim 12, the OA asserts:

It is unclear if a “query” is the same as a “query-length sequence”.

Claim 12 has been amended to clarify that, as in original Claims 5 and 13, the query length sequence is used to search the selected genomic database.

***Regarding Rejection of Claims 12 and 13 Under 35 USC §102(b) as Anticipated by LAI***

The OA asserts:

Lai et al. disclose a method for obtaining EST sequences from humans ... They format these sequences to be used by a BLAST search engine (page 449, 2<sup>nd</sup> column, lines 5-6). They search a database of *Drosophila* sequences ...

LAI does not disclose searching a database of *Drosophila* sequences using queries from human EST sequences. It teaches the converse, i.e., searching a BLAST-compatible Human Gene Index (HGI) (see LAI C02 L11-12 “perform TBLASTN searches against the HGI database”) using queries formed from *Drosophila* sequences.

Regardless, Claims 12 and 13 have been amended to clarify that the target database is not a single-species database, but contains “genomic data from a plurality of organisms,” further distinguishing the claims from LAI. This amendment finds support at least in [0055] and [0056] of the original disclosure.

**CONCLUSION**

The foregoing is submitted as a full and complete response to the OA mailed 05/29/2007 . With consideration of the above amendments and remarks directed to the rejections, the undersigned submits that this application is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that the prosecution might be advanced by discussing the application with the undersigned, in person or over the telephone, we would welcome the opportunity to do so. No new matter has been added to the disclosure. An examination on the merits at your earliest convenience is respectfully requested. Please contact undersigned with any questions that will expedite prosecution.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-4402, and please credit any excess fees to such deposit account.

Respectfully submitted,

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